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| Abstract |  |
| —A sensor network is composed of a large number of sensor nodes that are densely deployed either inside the phenomenon or very close to it. Clustering provides an effective way for prolonging the lifetime of a wireless sensor network. Current clustering algorithms usually utilize two techniques, selecting cluster heads (CHs) with more residual energy and rotating cluster heads periodically, to distribute the energy consumption among nodes in each cluster and extend the network lifetime. LEACH (Low-Energy Adaptive Clustering Hierarchy), a clustering-based protocol that utilizes randomized rotation of local cluster base stations (clusterheads) to evenly distribute the energy load among the sensors in the network. But LEACH cannot select the cluster-heads uniformly throughout the network. Hence, some nodes in the network have to transmit their data very far to reach the CHs, causing the energy in the system to be large. Here we have an approach to address this problem for selecting CHs and their corresponding clusters. The goal of this paper is to build such a wireless sensor network in which each sensor node remains inside the transmission range of CHs and its lifetime is enlarged. | |